

INDUSTRIAL VISIT REPORT

ON

**Gokul Dairy,
Kolhapur Zilla Sahakari Dudh Utpadak Sangh Ltd.,
Gokul Shirgaon, Kolhapur.**

SUBMITTED BY

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**B. TECH (ELECTRONICS AND TELECOMMUNICATION
ENGINEERING)**



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KOLHAPUR, MAHAHRASHTRA, INDIA.
YEAR 2023-24**

CERTIFICATE

This is certified that **Miss. Vaishnavi Appaso Khamkar** of the B.Tech Electronics and Telecommunication Engineering have successfully completed the industrial visit at “**Gokul Dairy, Kolhapur Zilla Sahakari Dudh Utpadak Sangh Ltd., Gokul Shirgaon, Kolhapur**” for the requirement of B.Tech Electronics and Telecommunication Engineering degree offered by Department of Technology, Shivaji University, Kolhapur for the academic year 2023-2024.

Date:

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(Subject Training Incharge)

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(Program Coordinator)

ACKNOWLEDGEMENT

We shall be failing in our duty, if we will not express our sincere gratitude to all those distinguished personalities with help of whom we successfully completed our visit.

Our deep gratitude to our **Director Dr. S. N. Sapali** and our **Program Coordinator of E&TC Department Dr. S. B. Chavan**, Department of Technology who always been playing a great role in all round development of the student. We would also like to thank our **Faculty In charge Dr. A. A. Shiolkar** and Class co-ordinator and **Mrs. Pooja H. Mane** and subject in charge **Mrs.M.A.Jere** all teaching and non-teaching staff for their kind support, help and assistance, which they extended as and when required particularly for taking keen interest in us to give us excellent and unforgettable facilities. Last but not the least we wish to thank our friends for cooperating with everyone. We hope that this industrial report would meet the high standards of all concerned people and for their continuous co-operation during the whole period of visit that helped us in enhancement of our knowledge.

INTRODUCTION

Kolhapur Zilla Sahakari Dudh Utpadak Sangh Ltd, Well known with its popular brand 'Gokul' is an Operation Flood cooperative dairy project established on 16th March 1963. Since then achieved many land marks in Milk Procurement, Extension, Animal Health, Breeding, Milk Processing, Product making and Marketing. At present Gokul has modern 17 Lakh Liters/day capacity dairy plant , satelite dairy at udgaon , tal shirol and 4 owned chilling centers having 7 Lakh Liters/day milk handling capacity with modern Packing Unit at Navi Mumbai.

For milk production enhancement in milk shed we have presently 46 Mobile veterinary routes , 406 Cluster A. I. Canters, A state of the art new 450 MT/day capacity Cattle Feed Plant with popular 'Mahalaxmi' brand is operational at Kagal-Hatkanangale Five Star MIDC. The old cattle feed plant with 200 MT/day capacity plant is simultaneously operational. With the assistance of NDDB Gokul started Total Milk Ration (TMR) project of 50 MT/Day capacity. The TMR plant was operational from 07 December 2018.



OBJECTIVES OF THE DUDH SANGH

- Development of infrastructure for procurement of Milk in rural areas of Kolhapur District to ensure an assured market for Milk producers throughout the year, as well as good remunerative prices.
- Fulfil the growing need for Milk & Milk products of the consumers in Maharashtra
- Organize the Co-operative structure of milk producers at the village level.
- Supplement the programme extension & inputs, with particular reference to feed & fodder production & implement an intensive breeding programme for Milk animals to increase Milk production.
- Imparting training for developing human resource at rural level for effective leadership, Management skills &

improvement of services to rural Milk producers.

- To meet customer satisfaction consistently by maintaining end product standard.
- To utilize resources effectively.
- To improve overall involvement of employees.
- To monitor annual return per rupee to the producers

INSTRUMENTS AND STRUCTURE

Milk Collection:

The milk collection area is called the "dairy dog," and milk cans with a capacity of 40 litres are used to transport the milk. The cans are labelled with red and blue colours, with red indicating buffalo milk and blue indicating cow milk. The empty cans are washed with 90°C water before reuse. The dairy collects milk from 12 talukas in Kolhapur district and neighbouring districts. The "dairy dog" is open only from 7 a.m. to 11 a.m.



Milk Processing:

For milk pasteurization, milk is heated to 78°C and immediately brought down to 0°C in a few moments, thus destroying all the germs in the milk. In order to maintain quality, it is necessary to reach the dairy dog within one hour from the milking of the cow or buffalo.



Milk Packaging

The manufacturing milk machine used is the "NICROME FILPACK CMD ALPHA", and there are eight machines in total. Each machine can manufacture two 500ml packs per minute. The milk temperature at the time of manufacturing is nearly equal to 0°C or less.



Capacity :

The milk reception capacity at Gokul Dairy is 5 lakh Liters/day (raw) and 12 lakh Liters/day (chilled). The milk process capacity is 15.0 to 17 lakh litres/day, and the powder manufacturing capacity is 52 MT/day.

Gokul's Present Setup:

A) Milk Reception Capacity	5 Lakh Ltrs/Day (Raw)
	12 Lakh Ltrs/Day Lakh(Chilled)
B) Milk Process capacity	15.0 to 17Lakh Ltrs/Day
C) Powder Manufacturing	52 MT/Day
D)Desi Loni (Desi Butter) Manufacturing :	
C. B. M. M.	40 MT/Day
Top Churn	8 MT/Day
E) Ghee Manufacturing	6 MT/Day
F) Packaging Lines :	
Milk Packaging	2.5 Lakh Ltr/day
Powder Packing-Nichrome (Pouch)	10 MT/day
Ghee Packaging (Pouch)	4.5 MT/Day
Table Butter Packaging	
In 500 gm	3 MT/day
In 100 gm.	1 MT/day
Total	4 MT/day
G) Storage Capacity :	
Milk (Packed Milk)	2.5 Lakh Ltr
Desi Loni (Desi Butter)	2000 MT
Powder	2000 MT
Ghee	20 MT to 30 MT
Milk (Raw/Process)	12.25 Lakh Ltrs.
Total Project Investment :	
Operation Flood Scheme- I / II (1978-1986)	12 Crore
Operation Flood Scheme-III (19951998)	33 Crore

Other Products :



- Gokul Cooking Butter
- Gokul Ghee
- Gokul Shrikhand
- Gokul Table Butter
- Gokul Dahi
- Gokul Paneer
- Gokul Lassi
- Gokul Cream (For Bulk Sale Only)
- Desi Butter (Desi Loni)
- Gokul Wmp (For Bulk Sale Only)

QUALITY POLICY

To enhance customer faith and satisfaction, we are committed in implementing and improving effectiveness of our quality management and food safety system for processing of milk and manufacturing of milk products. We believe in providing maximum benefits to our milk producers to uplift their standard of living by effective resource management and employee involvement.

Website - <http://www.gokulmilk.coop/> **Industries** - Dairy Product Manufacturing **Company**
size -1000-2000 employees **Headquarters** -Kolhapur, Maharashtra **Type** - Privately Held

Founded - 1963

Specialties -Full Cream Milk and cow Milk

There are various types of departments like boiler department, Electrical Department, Mechanical Department, Maintenance Department, Microbiology Department, etc. in Electrical Department, there are three transformers and all are step down transformer of the combination of 33kv, 11kv, 1500kv, 1000kv,

33000v. There are 6 Generator for the backup and they are of 250kv and 625kv. 3 workers are there for every shift. And the power supply goes to Fire pump, ETP, milk packing CAP Feeder, Air Compressor, Plant Lightning, Liquid Milk CIP, Liquid Milk Processor, Refrigerators, etc...

In Mechanical Department, there is most use of pumps for milk and water. So various types and size of pumps are used up to 200-250 pumps are there.

FOR MAINTAINANCE

Main Manager:- Anil Swami and Padaval Sir

Assistant Manager: - Abhijeet Patil

Supervisor :- Sandeep Patil

There are total 45 workers and Incubation room, power godown, finished product godown, cold room.

There is a cold room of temperature -20 to -25°C for the preservation and storage purpose of all products.

Storage Unit:

In a milk plant, a storage unit refers to a facility or area specifically designed for storing milk and dairy products. It is an essential component of the milk processing and distribution process, allowing for proper storage and preservation of the milk before it is further processed, packaged, or transported.

Temperature Control:

The storage unit is equipped with refrigeration systems that maintain the milk at a specific temperature to prevent bacterial growth and maintain its freshness. The temperature is usually set between 2 to 4 degrees Celsius for raw milk.





(Group Photo of Students and Teachers at Industry)

PROCUREMENT

- The rated milk handling capacity of the Gokul Dairy and chilling centres is 10.75 Lakh Litres per day.
- Dudh Sangh covers 3499 village level dairy co-operatives on 210 milk routes for Milk procurement every day.
- Since then, the figure has shot up year after year & today in the year 2008, the average procurement is more than 5 Lakh Litres per day.
- The ratio of Buffalo Milk to Cow Milk capacity is 78% to 22% respectively.
- The Buffalo fat % is 7.4 SNF 9.5 and the Cow fat % is 4.2 SNF 8.6.
- Average milk purchase price for buffalo milk is Rs. 19.04 and for cow milk is Rs. 12.03.
- Different Prizes and scheme for DCS and Milk Producer.

CONCLUSION

In conclusion, the industrial visit report on **Gokul Dairy**, Kolhapur Zilla Sahakari Dudh Utpadak Sangh Ltd., provided valuable insights into the milk processing industry. The report highlighted the company's history, milk collection, processing, packaging, and butter and milk powder production. The report concluded by thanking the company and individuals who facilitated the visit and provided valuable assistance. The visit provided a great learning opportunity for the student, and the knowledge gained will be beneficial in their future career endeavours.